

**DEVELOPMENT OF A STANDARD OPERATING PROCEDURE
FOR THE ORLANDO FIRE DEPARTMENT
TWO IN / TWO OUT RULE**

EXECUTIVE DEVELOPMENT

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ABSTRACT

The Orlando Fire Department did not have a formal policy to address the two in / two out provision of the Occupational Safety & Health Administration (OSHA) Respiratory Protection regulation 29 CFR 1910.134, mandated by OSHA in April 1998. This mandate required all OSHA state and federal fire fighters to have at least two fire fighters outside a structure, fully bunkered out, ready to effect a rescue of an interior attack team prior to initiating an interior attack on a fire above the incipient stage. The State of Florida is not an OSHA state; however, the state did adopt OSHA standards, thereby, requiring compliance with the federal mandate by all Florida Fire Departments. The purpose of this research was to develop a standard operating procedure (SOP) that enabled the Orlando Fire Department to be in compliance with the two in / two out rule.

Historical, evaluative and action research was used to answer the following questions and to develop a two in / two out SOP:

1. What are the required elements of the two in / two out rule?
2. Through informal interviews with Orlando's twelve Commanders of the Field Operations Bureau (FOB), determine if Orlando's Rapid Intervention Team (RIT) provide two in / two out compliance.
3. Does Orlando need a written SOP to provide compliance with two in / two out and if so provide a proposed SOP.

A literature review was completed; interviews were conducted and evaluated. Research identified the necessary components required for compliance for the two in / two out rule. The research and interviews showed that Orlando's FOB Commanders do

not feel that the Rapid Intervention Team SOP brings Orlando in compliance with the OSHA two in / two out rule.

The recommendation resulting from this research was that a SOP was needed for the Orlando Fire Department (OFD) to be in compliance with the two in / two out rule. A SOP was developed and a copy of both the proposed two in / two out SOP and OFD's Rapid Intervention SOP are in the Appendixs of this report.

TABLE OF CONTENTS

	PAGE
Abstract	2
Table of Contents	4
Introduction	5
Background and Significance	6
Literature Review	7
Procedures	13
Results	14
Discussion	16
Recommendations	17
References	19

APPENDIX

Appendix A – OFD’s Rapid Intervention Team SOP.....	21
Appendix B – Proposed SOP: Two In / Two Out Rule	26

INTRODUCTION

The Federal Occupational Safety and Health Administration (OSHA) published the final rule for 29 CFR 1910.134, Standard for Respiratory Protection on January 8, 1998. This regulation established a comprehensive respiratory protection standard for a multitude of industries. Section (g)(3) on procedures for immediately dangerous to life and health (IDLH) atmospheres and section (g)(4) on procedures for interior structural fire fighting have impact on fire service organizations. These two sections comprise what fire service professionals refer to as the two in / two out rule. This rule obligates fire departments to provide a minimum team of two personnel for an interior structure fire attack. The required outside back up team consists of a minimum of two additional personnel in full bunker gear with self contained breathing apparatus (SCBA) prior to initiating interior attack, with the primary role of providing for fire fighter rescue.

Orlando Fire Department does not have a written SOP to address the two in / two out rule for interior structural fire fighting. The purpose of this executive fire officer research paper is to perform action, evaluative and historical research to develop a SOP which enables OFD to comply with the two in / two out components of 29 CFR 1910.134. The research process will attempt to answer the following questions:

1. What are the required elements of the two in / two out rule?
2. Through informal interviews with Orlando's twelve Commanders of the Field Operations Bureau (FOB), determine if Orlando's Rapid Intervention Team (RIT) provides two in / two out compliance.
3. Does Orlando need a written SOP to provide compliance with two in / two out and if so provide a proposed SOP.

BACKGROUND AND SIGNIFIANCE

Orlando Fire Department serves a community of approximately 250,000 residents, with a geographical boundary of approximately 80 square miles located in central Florida. The department is composed of 350 career fire fighters working out of twelve stations. OFD has four fire stations with single engines that respond with four fire fighters, four fire stations with single engines with three fire fighters and rescue trucks with two fire fighters. In addition, OFD has four fire stations with single engines with three fire fighters, and rescue trucks with two fire fighters and a tower truck with four fire fighters.

A standard response to a structure fire is two engines, one rescue, one tower truck and a District Chief. In most cases, the first engine arrives in less than four minutes with the second engine usually arriving in two to three additional minutes.

Currently, OFD's standard operating procedure for the fire ground requires the first arriving engine to begin fire fighting with three fire fighters entering the structure and one pumping the engine (SOP Command Manual procedure for the fire ground, 1986). There is no provision for fire fighter safety or rescue until the designated RIT arrives. Usually, they arrive with the second alarm or long after initial fire fighting has begun. OFD's Rapid Intervention Team policy calls for a tower truck to be dispatched as a designated RIT (Rapid Intervention Team SOP, 1996) upon:

1. Deployment of a 1 ¾" or larger hand line and / or the laying of a supply line at fires or explosions in structures
2. Request for a second alarm by a responding unit
3. Upon request from an Incident Commander

With the adoption of the OSHA two in / two out rule, all fire departments in the State of Florida have been forced into reevaluating the safety of fire ground operations and adopting a two in / two out policy. The first step in addressing this issue was conducting research and interviews in order to:

- Research the key elements of OSHA 29 CFR 1910.134 rule interpretation
- Interviewing top fire ground commanders of OFD
- Recommend policy elements required for a practical two in / two out SOP

The second step was to develop a strategy for gathering information, evaluating results and formulating a conclusion. This research project was determined to be a key element of the research methodology. The relationship between this research and the National Fire Academy's Executive Fire Office Program course, Legal Issues, is clear.

LITERATURE REVIEW

The Occupational Safety and Health Administration has federal and state jurisdiction within the United States. Fire Departments are regulated by either federal OSHA or state OSHA requirements if the state has its own plan. Florida is not an OSHA state but has adopted the OSHA standard. The publication of 29 CFR 1910.134 on respiratory protection has caused a great deal of concern within the fire service. In the revised standard, there has been added a component addressing procedures for operating in immediately dangerous to life and health (IDLH) atmospheres which included the two in / two out rule. AN IDLH atmosphere is defined as an advanced structure fire that has spread inside a building in which high temperatures and smoke exist.

Literature search for periodicals having information about the two in / two out rule for the fire service was conducted through the Learning Resource Center (LRC) of the National Fire Academy (NFA). Sources reviewed included the text of the OSHA regulation, several compliance interpretations issued by OSHA, various fire service publications and a number of executive fire officer research project papers relevant to the topic.

This review begins with an overview of the components of the respiratory protection standard that specifically address the two in / out requirement. The Respiratory Protection standard was issued on January 8, 1998. States governed by federal OSHA had one year to comply while states not covered by OSHA but regulated by state OSHA plans had an additional six months to comply (Respiratory Protection Final Rule, 29 CFR 1910.134, 1998). Florida fell into the second category and adopted the OSHA standard in April 1998.

The following is a list of pertinent components of the two in /two out rule as outlined in the standard:

From Section (g)(3) – Procedures for IDLH Atmospheres

- (g)(3)(i) One employee or, when needed, more than one employee is located outside the IDLH atmosphere.
- (g)(3)(ii) Visual, voice, or signal line communications are mandated between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere.
- (g)(3)(iii) the employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue.

From Section (g)(4) – Procedures for Interior Structural Fire Fighting

- (g)(4)(i) At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times.
- (g)(4)(ii) At least two employees are located outside the IDLH atmosphere.
- (g)(4)(iii) All employees engaged in interior structural fire fighting use self-contained breathing apparatus (SCBA).

Note 1: One of the two individuals located outside the IDLH atmosphere may be assigned to an additional role, such as Incident Commander or Safety Officer, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any fire fighter working at the incident.

Note 2: Nothing in the section is meant to preclude fire fighters from performing emergency rescue activities before an entire team has assembled.

This addition to the Respiratory Protection standard has raised several questions for the fire departments, specifically in interpretation. Mr. Thomas N Cooper, Fire Safety Specialist at Purdue University, addressed a letter to OSHA requesting an interpretation of sections (g)(3) and (g)(4) of the standard concerning requirements of workers who actively conduct operations in IDLH atmospheres. OSHA's response in a letter dated November 1, 1995, was that OSHA does not consider all fires to constitute IDLH atmospheres. Incipient fires that do not create IDLH situations or external fire fighting efforts at major interior structural fires are not covered by the standard. The interpretation does not mandate the number of personnel necessary to staff a fire apparatus leaving a station. (OSHA Standards Interpretation and Compliance Letter, November 1995).

Mr. Mark Schultz, Senior Fire Inspector for Gallin, TN Fire Department, addressed a letter to OSHA concerning the two in / two out rule for interior fire fighting on April 30, 1998. Mr. Schlitz asked if the two in / two out rule for interior structural fire fighting was a one for one policy. He specifically asked “if four people were inside did that mean four people had to stand by outside? Likewise, if eleven people were inside did that require eleven people to be stationed outside the structure on stand-by and so on?” OSHA responded by stating that the two in / two out rule may not be interpreted as four in / four out or eight in / eight out. There must always be at least two fire fighters stationed outside during interior structural fire fighting, prepared to enter if necessary to rescue the fire fighters inside. (OSHA Standards and Interpretation and Compliance Letters, November 1998).

The Honorable Jeff Bingaman, United States Senator from Roswell NM, addressed a letter to OSHA on August 4, 1998, concerning the two in / two out policy. He specifically asked if the requirement could be waived for smaller communities. OSHA’s response on December 15, 1998, was that the extension of this standard to volunteer fire fighters is a matter decided by each state and is often dependant on whether volunteers are considered “employees” under state law. OSHA further states that the standard does not require the two in / two out provision if the fire is still in the incipient stage neither does it prohibit fire fighters from fighting the fire from outside the burning structure before sufficient personnel have arrived to mount an interior attack. Neither does it prohibit fire fighters from entering a burning structure to perform rescue operations when there is a reasonable belief that victims may be inside. It is only when fire fighters are engaged in the interior attack of a structure fire where no rescue is being

attempted that the two in / two out rule requirement applies. (OSHA Standards Interpretation and Compliance Letters, December 1998).

The overall view of the fire service publications referenced in the literature review on two in / two out, indicates a feeling that this provision to the standard may be one of the most important safety advances for fire fighters in this decade. “Too many fire fighters have died because of insufficient accountability or poor communication.” (IAFC 1998, p.1).

Many departments have the same questions about the two in / two out. One question addresses staffing levels. If the standard states that for every two fire fighters that enter the interior of a burning building, there has to be two exterior fire fighters available outside for rescue, this may pose operational problems for fire departments that respond with two or three person engine or truck companies. Additional staffing obviously would increase a fire department budget. Chief Marentette of the Muskegon Charter Township (Mich.) Fire Department commented on the two in / two out rule saying; “as a full time department, we don’t have the money it takes to put four personnel on every company.” (Marentette, 1998) This is a major concern for both career and volunteer fire departments.

Another question is who should assume the role of the exterior fire fighters designated for rescue activities? The standard states the Incident Commander or Safety Officer. This has raised concerns for departments because of the potential to greatly affect the incident command system. What happens to the incident when, for example, the incident commander is designated as one of the two in / two out back-up team and the situation warrants a rescue of interior personnel? This was addressed by stating that any

task the outside team performs while on stand-by duty must not interfere in any way with their primary responsibility of fire fighter rescue. (Cline, 1999)

In general, fire departments are working towards implementing and developing the two in / two out rule into their own fire ground operational procedures. Referring to a National Fire Academy Applied Research by H.J. Davis, entitled *Two-In Plus Two-Out Equals more than Four*, the Fort Scott Kansas Fire Department stated that “The first recommendation is that the Fort Scott Fire Department should develop, implement, and follow a SOP concerning staffing requirements at structure fires that is in compliance with the OSHA two in / two out rule.” (Davis 1999, p.32) Some departments such as the Metro-Dade, FL Fire Rescue Department, are already compliant with the rule and current staffing and response procedures (Sears, 1998)

Interviews were conducted with the 12 District and Division Chiefs assigned to the FOB of OFD. The consensus of the command level officers interviewed was that the two in / two out rule would, overall, improve the safety of fire fighters combating structure fires. They felt that OFD could respond without additional delay in fire attack and mitigation due to all single engines having four fire fighters and engines that had rescues housed with them had a total of five fire fighters arriving at the fire ground. The consensus about OFD’s RIT policy was that it was a valuable safety procedure but would not satisfy the two in / two out requirement. The consensus was that with two in / two out rule and SOP, safety would be provided as fire attack was begun. Without the two in / two out attack rule and SOP, interior fire attack would begin without this additional fire fighter protection and the RIT would be several minutes away or would not be dispatched until attack began.

PROCEDURES

Definition of Terms

CFR: Code of Federal Regulations

IDLH: Immediately dangerous to life or health.

NFA: National Fire Academy

OSHA: Occupational Health and Safety Administration. This Administration is responsible for regulating health and safety in the workplace. OSHA issues health and safety regulations and sets standards for the occupational environment.

SCBA: Self-contained breathing apparatus

SOP: Standard Operating Procedure

RIT: Rapid Intervention Team

Methodology

Research for this project employed action, evaluative and historical techniques to gather information sufficient to assess the problem of two in / two out compliance as stated in the introduction.

The collection and review of the available literature pertaining to this subject was the first step taken in conducting this research. This was accomplished by identifying sources of information: Fire Service journals and periodicals, the Internet, Government agencies and Orlando Fire Department. The review of the available literature provided insight that personal interviews with people who are involved with the staffing, response, and fire ground safety of OFD personnel would provide for a more complete answer to the research questions.

The personal interviews were conducted on a group of 12 command level officers with OFD. These officers were presented with open-ended questions pertaining to the OSHA two in / two out rule and what they felt the impact would be to OFD response times to initial mitigation efforts. These interviews were conducted over a one-month period in the summer 1999.

Assumptions and Limitations

The assumption can be made that any restrictive measure regarding the number of personnel necessary to initiate an interior fire attack could have an effect on the response time to initial mitigation efforts. This research was limited by the fact that OFD had no tangible data available that would statistically prove if initial response and mitigation efforts were affected by adherence to the OSHA two in / two out standard. The research was further limited by dependence on personal accounts and opinions, not data, for answers to portions of the research questions.

RESULTS

Answers to Research Questions

1. What are the required elements of the two in / two out rule?

Using the OSHA Respiratory Protection regulation 29 CFR 1910.134 as a reference, the following elements were found to impact the department's ability to comply with the two in / two out rule. For operating within an IDLH atmosphere, the department must ensure that fire fighters work in teams of two, maintain constant voice communication and be properly trained and equipped with SCBA. Further, when fire fighters are operating within the IDLH environment, two fire fighters that are

properly trained and equipped for entry shall be positioned outside the IDLH hazard area, prepared to make entry should a rescue or assistance be necessary for those inside. One of the two important notations for compliance to this rule are that one of the two “out” personnel can perform other tasks (such as incident commander) as long as their task would not preclude them from making entry without jeopardizing the safety of the operation. Finally, this rule does not prevent fire fighters from making an entry prior to having “2-out” when a rescue must be performed.

2. Through informal interviews with Orlando’s twelve Commanders of the Field Operations Bureau (FOB), determine if Orlando’s Rapid Intervention Team (RIT) provide two in / two out compliance.

It appears, based on OFD’s SOP’s in the command manual (Command Manual fire ground operations, 1986) and the consensus of the command level officers who were interviewed that the RIT SOP does not provide for two in / two out compliance. The RIT provides for a separately dispatched team to arrive after initial attack and mitigation efforts have begun. The two in / two out rule requires two outside fire fighters to operate as a safety team while initial attack and mitigation efforts are begun.

3. Does Orlando need a written SOP to provide compliance with two in / two out and if so provide a proposed SOP.

The research and interviews showed that a stand-alone SOP should be developed to address the departments policy on compliance with the OSHA two in / two out standard. While OFD’s current policy’s are comprehensive in many areas and provide for safety on the fire ground, it was the consensus that in order to be in

compliance OFD needs a written SOP for two in / two out. It was also the consensus that a written adoption of two in / two out would greatly benefit and safety of OFD fire fighters.

DISCUSSION

The results of the research indicated that the subject of OSHA's "two in / two out" rule raises many questions about its impact on staffing and operational decisions in fire departments across the nation. Sears (1998) noted departments located in "non-OSHA" states have determined this important safety regulation should be adopted by their organization as it will become the measuring stick by which they may be judged in the event of a fire fighter fatality or injury. The intent of the regulation is clear: provide for the safest operational environment reasonable when working in an IDLH atmosphere. The key elements of this include the use of self-contained breathing apparatus (SCBA) and a reliance on teams of at least two. Whenever a team of two is operating inside an IDLH atmosphere, a team of two shall remain outside the hazard area, prepared to enter in an emergency mode should the interior team require emergency assistance.

The research results indicated that compliance with this regulation is gradually occurring in most departments surveyed. While organizations deal with the staffing issues related to this issue in several different ways, one thing seems to be a common first step: the creation and adoption of a formal written SOP or policy. For example, in an Executive Fire Officer (EFO) paper by Davis (1999, p.32), his first recommendation to his department was "...develop, implement, and follow a standard operating procedure

concerning staffing requirements at structure fires that is in compliance with the OSHA two-in, two-out rule.”

Staffing issues are central to the two in / two out policy issue since any compliant policy on the subject will require a minimum of four operational personnel on scene prior to initiating an interior non-rescue attack in IDLH conditions.

There was no question that the adoption of this regulation was in the fire fighter’s best interest assuring that an adequate number of personnel were available when initiating an interior attack. However, as evidenced in the personal interviews conducted, there was, and still is, a lot of concern of company officers who feel that the standard will take away their ability to make decisions that could save someone’s life. These concerns have been put to rest by the exception to OSHA’s 29 CFR 1910.134 and should not cause concern or worry about being able to perform a rescue upon initial attack and mitigation efforts without four fire fighters on the fire ground. It is a fact that fire fighters often overlook their own safety in order to help others. The only problem with that is when one of your own goes down on the fire scene, you need to be prepared to be able to rescue them. (Coleman, 1999,p.32)

RECOMMENDATIONS

After reviewing all information, the researcher has determined that OFD must adopt a two in / two out SOP as soon as possible since OFD has already missed the implementation dates. OSHA 29 CFR 1910.134 does not apply in Florida but was adopted by Florida. It is recommended that OFD adopt the written two in / two out proposed SOP contained in Appendix B of this report.

As with any new policy, training is the key element to its successful implementation. Staffing should not be a major consideration in Orlando Fire Departments compliance to the two in / two out rule with the minimum staffing and response in place.

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APPENDIX A

ORLANDO FIRE DEPARTMENT

RAPID INTERVENTION SOP

COMMAND MANUAL: 915-97-31

SUBJECT: Rapid Intervention Team (R.I.T.)

ISSUE DATE: 13 January 1997 EFFECTIVE DATE: 16 January 1997
 ISSUED BY: Field Operations Bureau
 Alan MacAllaster, Deputy Chief

APPLICABLE TO: All FOB Personnel

AMMENDS: RESCINDS:

REFERENCE:

1. PURPOSE

The purpose of the Rapid Intervention Team (R.I.T.) is to be immediately available for rescue of a member or team who becomes trapped or is in distress at emergency incidents.

This guideline is intended to increase safety for member operating at hazardous emergency incidents by ensuring the presence of a dedicated team for rescue of members. R.I.T.'s should be liberally utilized by Incident Commanders (I.C.).

2. NOTIFICATION

2.1 A R.I.T. will be dispatched by communications in the following situations:

2.1.1 Deployment of a 1 ¾" or larger hand line and/or the laying of a Supply line at fires or explosions in structures:

2.1.2 Request for a second alarm by a responding unit;

2.1.3 Upon Request from an Incident Commander.

2.2 Communications will dispatch an additional tower ladder (truck) company to be designated and dedicated as the R.I.T. The Division Commander will be dispatched with the R.I.T.

2.3 The first arriving Chief Officer will evaluate the need for a R.I.T. and continue, cancel or reinforce the R.I.T. based upon his or her analysis of the dangers to which members may be exposed given the conditions/situation at the incident scene.

2.4 The Incident Commander will ensure that safety and accountability functions are appropriately provided for and should request or designate and additional Chief Officer as the Safety Officer if incident conditions/situation warrants such.

Rapid Intervention Team
Page 2

- 2.5 Communications shall notify the assigned unit that they are assigned as the R.I.T. unit.
 - 2.6 Communications shall notify the Incident Commander of the identity of the responding R.I.T. unit, and receive acknowledgement of same from the Incident Commander.
 - 2.7 The Incident Commander shall evaluate the situation and the risks to operating teams, and shall provide one or more R.I.T.'s commensurate with the needs of the situation.
3. POSITION
- 3.1 The officer of the R.I.T. unit shall, upon arrival, report to and remain at the Command Post, unless otherwise directed by the Incident Commander.
 - 3.2 The entire R.I.T. unit shall remain near the Command Post, within verbal contact distance, at a position from which they can be readily deployed.
 - 3.3 At a high rise fire or other large-scale operation, the Incident Commander may stage a (the) R.I.T.(s) at the other tactically advantageous positions such as below the fire floor, at perimeters, etc.
 - 3.4 As the incident expands in size or complexity and/or in unusual operations, additional R.I.T. units may be requested/designated and positioned at additional locations as determined by the Incident Commander.
4. DUTIES
- 4.1 The R.I.T. unit shall be dedicated to that function.
 - 4.2 The R.I.T. Unit Officer shall, upon arrival, verify that the Incident Commander is aware of the unit presence and designation as R.I.T. If assigned by a superior officer to other than R.I.T. duties, the R.I.T. unit officer shall REMIND such superior R.I.T. designation.
 - 4.3 The R.I.T. unit shall "stand fast", intact as a unit ready to take immediate action as directed by the Incident Commander.

Rapid Intervention Team

Page 3

- 4.4 The R.I.T. officer shall review the building features floor plan and preplans. The officer should be familiar with what units are operating and their location in the building. A R.I.T. company location map should be utilized to track company locations.
- 4.5 The R.I.T. unit shall determine the location of EMS personnel at the scene and assess the readiness and adequacy of transport capabilities should a member(s) require transport. If the resources are inadequate, the Incident Commander shall be apprised of the situation and the need for additional EMS/transport resources.
- 4.6 The Engineer is to be available to raise, position, reposition and operate any available tower truck.
- 4.7 The R.I.T. unit shall maintain a state of constant readiness to react rapidly to changing incident conditions.
- 4.8 Radio transmissions shall be monitored for any indication of members in distress.

5. TOOLS / EQUIPMENT

- 5.1 The R.I.T. shall be fully equipped with the appropriate protective clothing, protective equipment, SCBA, and specialized rescue equipment that might be needed given the specifics of the operation(s) in which companies are engaged.
- 5.2 While standing fast, the R.I.T. unit shall determine the availability and location of tower and portable ladders, portable lights, extrication tools and/o other tools and equipment which might be needed to perform rescue duties. At a minimum, R.I.T. members shall be equipped with the following:
 - 5.2.1 Officer: 6' hook, 2 air bottles in harness, search line and rope bag
 - 5.2.2 Engineer: Haligan, flat head axe, K-12 W/carbide tip
 - 5.2.3 L.Jump: 6' hook, sledge, K-12 /composite blade
 - 5.2.4 R. Jump: 6' hook, flat head axe, haligan, chain saw and slice pack

Rapid Intervention Team
Page 4

- 5.3 The R.I.T. unit may not be used to provide relief for operating units until the fire has been declared “OUT” and all personnel accounted for. The Incident Commander should anticipate this need and have units other than the R.I.T. unit available for this purpose.
- 5.4 The R.I.T. unit shall not be used for fire fighting. When the Incident commander redirects the R.I.T. unit to work, other duties, and additional truck company will be called immediately and designated as a R.I.T. unit. An engine company may be designated as a R.I.T. unit pending arrival of the additional truck.
- 5.5 In the event high fire activity impacts the truck company availability, the Communications supervisor may substitute an engine company as a R.I.T. unit. The Incident Commander shall be notified of the substitution.

6. REPORTS

- 6.1 When a designated R.I.T. unit performs R.I.T. duties at an incident, the Incident Commander shall forward a detailed report of such duties via the chain of command to the Field Operations Bureau Commander and Fire Chief.

7. POSTING

Post in accordance with G.O. 95-901-2

APPENDIX B

DRAFT PROPOSAL

ORLANDO FIRE DEPARTMENT

TWO IN / TWO OUT SOP

TWO IN / TWO OUT SOP

I. Purpose

To establish standard guidelines and procedures that will serve to provide a safe working environment for all employees and to reduce the risk of injury or death as a result of department operations at emergency incidents. This policy will serve to comply with 2 in / 2 out provisions in the OSHA Respiratory Protection Final Rule, 29 CFR 1910.134 (g)(4).

II. Scope

To operate as safely and effectively as possible on emergency scenes, the Orlando Fire Department has established the following procedures, which shall be adhered to by all personnel.

III. Definitions

- A. **Immediately Dangerous to Life and Health (IDLH) Atmosphere:** An atmospheric concentration of any toxic, corrosive, or asphyxiate substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.
- B. **Rapid Intervention Team (RIT):** A specifically tasked team (minimum of two members) organized to provide personnel for the rescue of emergency service members, if the need arises, operating at emergency incidents.
- C. **Incipient Fire:** A fire in the initial or beginning stage that can be controlled or extinguished by portable fire extinguishers. However, it is the policy of the Orlando Fire Department to deploy a 1 ¾" hand line any time there is a fire inside of a structure. Though the incipient fire may actually be controlled by a smaller line or portable extinguisher, a 1 ¾" hand line shall be used in most cases.

IV. Procedures

- A. The first arriving company shall determine if the incident involves an IDLH atmosphere. At no time shall individuals enter an IDLH atmosphere independently. Teams of at least two (2) SCBA equipped personnel shall be required for entry into such an atmosphere at any time.
- B. In fire situations it will be necessary for the incident commander (or first arriving company officer) to determine if the fire is in the incipient stage. A team of two firefighters may take action according to standard operating

procedures to extinguish an incipient fire without the establishment of an initial Rapid Intervention Team.

- C. If the presence of an IDLH atmosphere has been determined and there are less than 4 firefighters on the scene, these firefighters shall not conduct interior operations within the IDLH atmosphere. Once at least 4 firefighters are on the scene two qualified firefighters may begin operating within the IDLH atmosphere as long as two additional firefighters (properly equipped) are outside the IDLH atmosphere to serve as the initial rapid intervention team. One of the RIT members must be responsible for maintaining the location of the interior crews. The second RIT member may be assigned other tasks and/or functions so long as these tasks and/or functions can be abandoned without placing any personnel at additional risk if rescue or assistance is needed.
- D. Members operating in IDLH atmospheres must use SCBA and work in teams of two or more. They must also maintain voice or visual contact with each other at all times. Portable radios are not acceptable as replacements for voice or visual contact. Radios can be used for fire ground communications, including communications between interior and exterior teams. However, they cannot be the sole tool for accounting for one's partner during interior operations. Team members must be in close proximity to each other to provide assistance in case of an emergency.
- E. Until four (4) firefighters are assembled, operations outside of the IDLH atmosphere shall commence immediately in accordance with standard operating procedures. Such operations include, but are not limited to: establishment of a water supply; exterior fire attack; establishment of a hot zone; utility control; ventilation; placement of ladders; forcible entry; exposure protection, and any other exterior operations deemed appropriate by the incident commander (company officer).
- F. As the incident progresses to the point of more than one interior team, an identified and dedicated RIT shall be established and positioned immediately outside the IDLH atmosphere. This team shall be fully outfitted with protective clothing and SCBA with the air mask in a ready position to don, a portable radio, and other required rescue equipment. Team members will be dedicated to perform rescue and shall not be assigned other duties (except for incident accountability). A charged hose line shall be dedicated to this team.
- G. If the incident is in a high or mid-rise structure, large area facility, or other area with multiple IDLH atmospheres, the incident commander shall establish the necessary number of RIT's so that rescue can be accomplished without a deployment delay. A team should be considered for each remote access point on any large facility. The incident commander will be responsible for

determining the number of teams needed based on the specifics of the incident.

- H. As soon as a firefighter becomes trapped, lost, or knows of an entrapped or lost firefighter immediately use the radio to declare a “MAY-DAY”, push the emergency button on the radio and activate PASS device. These functions should be immediately , followed by your company identification, location, and situation.

A declaration of “MAY-DAY” will be followed by the emergency traffic TONE, followed by a repeated report of the “MAY-DAY” declaration: “MAY-DAY”, “MAY-DAY”EMERGENCY TRAFFIC TONE..... *“Engine 2 has a downed firefighter in quadrant B, Northwest corner”. “Orlando copies. All units, Engine 2 is reporting a downed firefighter in quadrant B, Northwest corner.”*

The “EMERGENCY TRAFFIC” announcement will continue to be used for other high-risk hazards at the scene such as to evacuate the building or power lines down.

- I. If a firefighter(s) becomes trapped, disabled, or otherwise in need of assistance by the RIT, the incident commander shall announce this action to Orlando (Communications) via the radio. In turn, Orlando shall simulcast the emergency message signal and announce that a rescue is in progress. All radio traffic that is not directly related to the firefighter(s) rescue shall cease immediately to facilitate the rescue. An immediate personnel accountability report (PAR) shall be conducted. The incident commander of their progress and actions taken during the rescue.
- J. Should the incident commander order a building evacuation, a PAR shall be conducted (as outlined in the SOP's, Personnel Accountability System) immediately after the building has been evacuated. The RIT shall remain in place for immediate activation should a team fail to report during the PAR.
- K. This policy also includes and applies to interior fire fighting within a downed aircraft.

V. Exceptions

- A. If upon arrival at a fire emergency, members find a fire in its incipient stage, extinguishment of such a fire shall be permitted with less than 4 persons on the scene. Extinguishment of outside fires such as dumpsters, brush, or automobiles, shall be permitted with less than 4 persons, even if SCBA is being worn.
- B. If upon arrival at the scene members find an imminent life-threatening situation or probable life threatening situation where immediate action may

prevent the loss of life or serious injury, such action shall be permitted with less than 4 persons on the scene. The rescue can be attempted when the probability of a rescue is made in accordance with normal size-up indicators and fire ground evaluation factors. (Examples: a reliable report of persons inside, signs of persons inside, etc.).

- C. The incident commander (or company officer) shall evaluate the situation, considering the occupancy, time of day, day of week, reports from persons on the scene, signs that persons may be inside the structure, etc. Entry may be considered if signs indicate a probable victim rescue.
- D. In the absence of clear signs or a report from a responsible person on the scene that people are in the structure, it is to be assumed that no life hazard exists and interior attack shall not be initiated until the minimum of 4 persons arrive on the scene.
- E. If members are going to initiate actions that would involve entering an IDLH atmosphere because of a probable or imminent life-threatening situation where immediate action may prevent the loss of life or serious injury, and at least 4 firefighters are not on the scene, the members should carefully evaluate the level of risk that they would be exposed to by taking such actions. In all cases a minimum of two (2) firefighters shall form the entry team.
- F. If it is determined that the situation warrants immediate intervention and 4 firefighters are not on the scene, the incident commander (or company officer) shall notify Orlando of the intent to enter the IDLH atmosphere prior to the availability of a rapid intervention team. Orlando shall then notify all responding companies of this action and receive acknowledgement from responding District/Division Commanders that the transmission was received. (Example: "Orlando to all responding units, E-3 is making an interior rescue with a 3 person crew". "District One Acknowledge".)
- G. Should the incident commander (or company officer) on the scene deviate from this guideline; the actions taken shall be documented on the fire incident report and forwarded through the chain of command to the fire chief. The narrative of this report shall be by the incident commander and outline the reasons, rationale, justification, and end result of the deviation from standard operating procedure. All information in the report shall be of enough depth so as to provide a comprehensive understanding of the actions taken.